



4229.0 - Adult Learning, Australia, 2006-07

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Summary

Main Features

NOTES

ABOUT THIS PUBLICATION

This publication presents information about the recent learning experiences of persons aged 25 to 64 years. Statistics in this publication were collected in the Adult Learning topic included in the 2006-07 Multi-Purpose Household Survey (MPHS).

Details on participation in formal, non-formal and informal learning in the 12 months prior to interview are presented together with the socio-demographic characteristics of participants and non-participants.

Information on the concepts and methods used in the survey, reliability of the results and definitions and interpretation are included in the Explanatory Notes, Technical Note, and Glossary.

Unless otherwise specified, differences between data items highlighted in the Summary of Findings are statistically significant. See Technical Note (paragraph 16-18) for further details.

ABOUT THE 2006-07 MPHS

The MPHS was conducted throughout Australia as a supplement to the Australian Bureau of Statistics (ABS) monthly Labour Force Survey (LFS). As well as information concerning adult learning, information was collected about the following topics:

Barriers and Incentives to Labour Force Participation (cat. no. 6239.0)

Retirement and Retirement Intentions (cat. no. 6238.0)

Family Characteristics and Transitions (cat. no. 4442.0)

Household Use of Information Technology (cat. no. 8146.0).

ROUNDING

Where figures have been rounded, discrepancies may occur between the sum of component items and the published total.

INQUIRIES

For further information about these and related statistics, contact the National Information and Referral Service on 1300 135 070.

Summary of Findings

SUMMARY OF FINDINGS

INTRODUCTION

This publication presents data on aspects of adult learning. There is continuing interest in the concept of lifelong learning and the importance of 'continuing education and training' as a measure of human capital. The concept for adult learning is taken from an international survey which focusses on measuring three categories of learning: formal learning, non-formal learning and informal learning.

Formal learning is structured, taught learning in institutions and organisations, which leads to a recognised qualification. A learning activity is formal if it leads to a learning achievement that is possible to position within the Australian Qualifications Framework (AQF) and includes workplace training if such training results in a qualification.

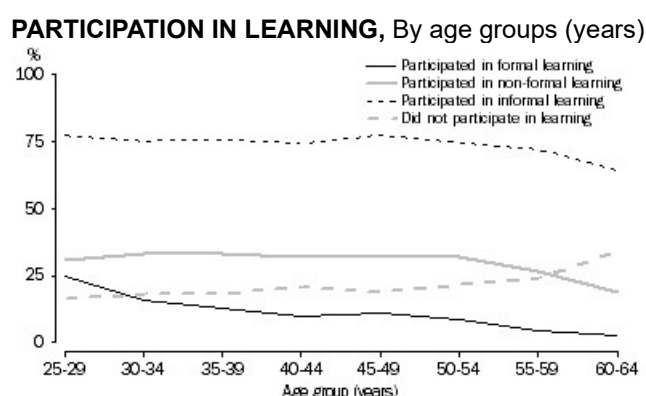
Non-formal learning also refers to structured, taught learning, but differs from formal learning in that it does not lead to a qualification within the AQF.

Informal learning refers to unstructured, non-institutionalised learning activities that are related to work, family, community or leisure. Activities may occur on a self-directed basis, but are excluded from scope if there is no specific intention to learn.

One in eight (12% or 1.3 million) Australians aged 25 to 64 years participated in some form of formal learning in the 12 months prior to interview in 2006-07. Almost one-third (30% or 3.3 million persons) participated in non-formal learning and approximately three-quarters (74% or 8.1 million persons) participated in some form of informal learning. (Table 1)

AGE AND SEX

Younger people were more likely to participate in formal learning than older people, with those aged 25-29 years reporting the highest formal learning participation rate (25%) and those aged 60-64 years the lowest (3%). There was little variation across age groups in participation in non-formal and informal learning, except for those aged 60-64 years who had slightly lower participation rates for all forms of learning. (Table 1)



While a slightly higher proportion of females than males participated in formal learning (13% compared to 11%), a higher proportion of males than females participated in non-formal learning (32% compared to 29%) and informal learning (76% compared to 73%). (Table 1)

COUNTRY OF BIRTH

Equal proportions of persons born in Australia and overseas participated in formal learning (12%), however persons

born in Australia had a somewhat higher participation rate in non-formal learning (32% for Australian born and 27% for overseas born) and in informal learning (75% for Australian born and 72% for overseas born). (Table 1)

EDUCATIONAL ATTAINMENT

Persons with a higher educational qualification had higher participation rates in formal or non-formal learning. Of those whose highest qualification was a Bachelor degree or higher, 55% had participated in formal or non-formal learning compared to those who had an Advanced diploma or below at 42%. Of those who did not hold a non-school qualification, 24% participated in formal or non-formal learning. (Table 1)

Of those whose highest qualification was a Bachelor degree or higher, 89% had participated in informal learning compared to 79% of those who had an Advanced diploma or below. Of those who did not hold a non-school qualification, 62% participated in informal learning. (Table 1)

LABOUR FORCE

Those employed full-time were more likely to have participated in some form of learning than persons not in the labour force (84% compared to 62%). Unemployed persons had lower participation in non-formal (25% compared to 38%) and informal learning compared to persons employed full-time (71% compared to 79%). (Table 1)

Of the 3.6 million employed persons who participated in formal or non-formal learning, 29% were professionals, 15% were clerical and administrative workers and 14% were managers. Of the employed persons who participated in formal or non-formal learning 15% were employed in the health care and social assistance industry, 11% in education and training and 9% in public administration and safety. (Table 6)

INCOME

Persons in the highest equivalised weekly household income quintile were more likely to participate in all forms of learning than persons in the lowest quintile. This difference was greatest for persons participating in non-formal and informal learning with almost half (46%) of the persons in the highest quintile participating in non-formal learning and 84% participating in informal learning, compared to 15% who participated in non-formal learning and 60% who participated in informal learning in the lowest quintile. This result may be influenced by the number of full-time students who are involved in formal learning. (Table 1)

PARTICIPATION IN FORMAL LEARNING

Of those who participated in formal learning, over one-quarter (26%) undertook a Certificate III or IV. This was followed by Bachelor degree (18%) and Postgraduate degree, Graduate diploma or Graduate certificate (17%). (Table 7)

Management and commerce was the most popular field of education with 28% of persons who participated in formal learning in the previous 12 months participating in this field. This was followed by Society and culture (21%) and Health (12%). (Table 7)

PARTICIPATION IN NON-FORMAL LEARNING

Of the 3.3 million persons who participated in non-formal learning in the previous 12 months, the most common type of most recent non-formal learning was a work-related course (78% or 2.6 million) followed by Arts, crafts or recreational learning (12%). (Table 8)

The main fields of the most recent non-formal learning were Management and commerce (25%) and Health (22%). (Table 8)

MAIN REASONS FOR PARTICIPATION

The main reasons for participating in the most recent formal learning were 'to get a better job or promotion' (28%), 'wanted extra skills for job' (21%), and 'was a requirement of job' (14%). (Table 7)

The main reasons for participating in the most recent non-formal learning were because 'it was a requirement of job' (36%), 'wanted extra skills for job' (25%) and for 'personal interest' (16%). (Table 8)

PARTICIPATION IN INFORMAL LEARNING

Informal learning was participated in by 8.1 million Australians, with 76% of males and 73% of females participating in the previous 12 months. (Table 1)

The most common type of informal learning was reading manuals, reference books, journals or other written materials (75%), this was followed by using computers or the Internet (71%). (Table 10)

PERSONS WHO DID NOT PARTICIPATE IN LEARNING

More than one-fifth of Australians did not participate in any form of learning (21%). Non-participation occurred at higher rates in older age groups with 34% of those aged 60-64 years not participating in learning, compared to 16% of those aged 25-29 years. (Table 1)

Non-participants were more likely to not be in the labour force than those employed full-time or unemployed (38% compared to 16% and 24%). (Table 1)

Of persons who did not participate in any learning in the last 12 months, labourer was the most common occupation (18%). The most common industry for those who did not participate in any learning was the manufacturing industry (14%) followed by persons employed in the retail trade industry (11%). (Table 6)

Those with lower educational attainment were more likely to have not participated in any learning. About one in seven (15%) persons who held an Advanced Diploma or below did not participate in learning in the last 12 months compared to 7% of those who held a Bachelor degree or higher. Of those who did not hold a non-school qualification, 34% did not participate in learning in the previous 12 months. (Table 1)

Non-participation was more likely for persons in lower equivalised weekly income quintiles. Of persons who did not participate in learning a higher proportion were in the lowest equivalised weekly household income quintile (16%) than in the highest quintile (10%). (Table 1)

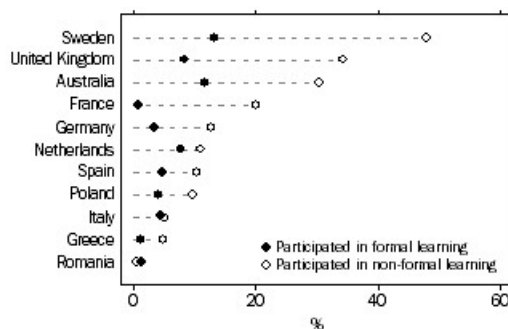
Of those who did not participate in formal or non-formal learning but wanted to participate, the main reasons for not participating were 'too busy at home, work or with leisure activities' (44%) and 'training too expensive/could not afford it' (18%). (Table 15)

INTERNATIONAL SURVEY

A similar survey on life long learning was conducted in a number of European countries in 2003. The highest reported participation rate from the survey for formal learning was for Sweden at 13%. The highest reported participation rates in non-formal learning were for Sweden at 48% and the United Kingdom at 35%. (Table 4)

International comparisons are affected by different response rates in the respective participating countries and for this reason such comparisons should be treated with caution (see Explanatory Notes, paragraph 54).

PARTICIPATION IN FORMAL OR NON-FORMAL LEARNING, Selected European countries and Australia



About this Release

Contains estimates of formal, non-formal (e.g. work related) and informal (e.g. reading manuals) training. Details are provided on main fields of study, learning opportunities available and obstacles to learning that have been experienced.

Explanatory Notes

Explanatory Notes

EXPLANATORY NOTES

INTRODUCTION

1 This publication presents results on Adult Learning from the 2006-07 Multi-Purpose Household Survey (MPHS). The MPHS is conducted throughout Australia as a supplement to the Labour Force Survey (LFS). The MPHS is usually conducted each month but in 2006-07 the survey was not conducted in August and September due to problems identified with the collection of another topic which required rectification. Adjustments were made to the sample in the subsequent months to achieve the target sample size. This is not expected to have an impact on the Adult Learning data.

2 The MPHS is designed to provide statistics annually for a small number of self-contained labour, social and economic topics. In 2006-07 the topics were:

- Adult Learning
- Barriers and Incentives to Labour Force Participation
- Retirement and Retirement Intentions
- Household Use of Information Technology
- Family Characteristics and Transitions

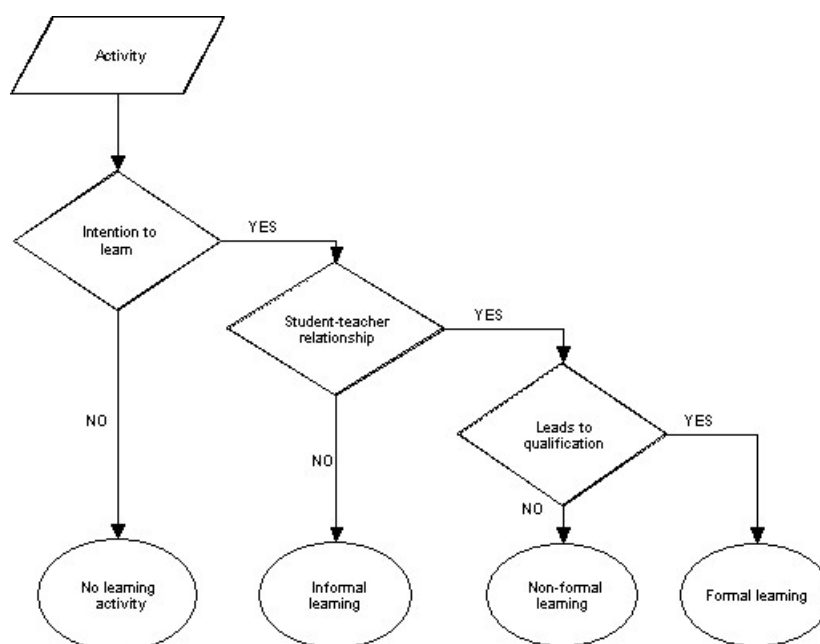
3 The MPHS also collected other socio-demographic information such as educational qualifications, labour force status and personal and household income.

4 Data from other MPHS topics collected in 2006-07 will be released in separate publications.

5 The MPHS collected data on Adult Learning for persons aged 25 to 64 years. The topic focused on measuring three categories of learning: formal learning, non-formal learning and informal learning, as well as access to and opportunities for learning.

6 The Classification of Learning Activities developed by Eurostat (see http://epp.eurostat.ec.europa.eu/cache/ITY_OFFPUB/KS-BF-06-002/EN/KS-BF-06-002-EN.PDF) has been used to define these three categories of learning. The classification aims to operationalise the concept of learning by proposing simple, clear and understandable criteria which should be used when taking a decision on the allocation of education and learning activities according to the 3 categories. The relevant decision making flow chart is presented in Figure 1.

Figure 1: Classification of learning



7 Formal learning is structured, taught learning in institutions and organisations, which leads to a recognised qualification issued by a relevant body, in recognition that a person has achieved learning outcomes or competencies relevant to identified individual, professional, industry or community needs. A learning activity is formal if it leads to a learning achievement that is possible to position within the Australian Qualifications Framework (AQF) and includes workplace training if such training results in a qualification.

8 Non-formal learning also refers to structured, taught learning, but differs from formal learning in that it does not lead to a qualification within the AQF. It includes non-accredited workplace training, that is, training that does not lead to a recognised qualification.

9 Informal learning refers to unstructured, non-institutionalised learning activities that are related to work, family, community or leisure. Activities may occur on a self-directed basis, but are excluded from scope if there is no specific intention to learn.

10 Formal and non-formal learning can be referred to as organised or 'course-based' forms of learning which together encompass what the OECD refers to as 'continuing education and training'.

11 The Adult Learning topic on the MPHS was based on an international survey, the Adult Education Survey, which was developed by Eurostat and conducted in European countries in 2006. The Adult Education Survey questions were adapted to suit an Australian sample. The Task Force report on the Adult Education Survey contains more information about the development and contents of the Adult Education Survey and is available on the Eurostat website at http://epp.eurostat.ec.eu.int/cache/ITY_OFFPUB/KS-CC-05-005/EN/KS-CC-05-005-EN.PDF.

12 The proposed core target population of the European Adult Education Survey was adults aged 25 to 64 years, which is designed to exclude people who are in the initial stages of education. Since the ABS Adult Learning is based on the European Adult Education Survey, the same population was chosen.

13 Selected questions from a previous ABS survey, the Adult Education and Training topic on the May 1995 Population Survey Monitor, were also included. See Population Survey Monitor, May 1995 (cat. no. 4103.0) for more information about the Adult Education and Training topic from the May 1995 Population Survey Monitor.

DATA COLLECTION

MPHS

14 The MPHS is conducted as a supplement to the monthly Labour Force Survey (LFS). One third of the dwellings in the outgoing rotation group (one eighth of the LFS sample is rotated out each month) are selected for the MPHS. In these dwellings, after LFS has been fully completed for each person in scope and coverage, a person (usual resident) aged 15 years and over is selected at random (based on a computer algorithm) and asked the additional MPHS questions in a personal interview. Data are collected using Computer Assisted Interviewing (CAI), whereby responses are recorded directly onto an electronic questionnaire in a notebook computer generally during a telephone interview.

15 The sample was accumulated during July 2006 to June 2007.

SCOPE

LFS and MPHS

16 The scope of the LFS is restricted to people aged 15 years and over and excludes the following persons:

- members of the permanent defence forces
- certain diplomatic personnel of overseas governments, customarily excluded from census and estimated populations
- overseas residents in Australia
- members of non-Australian defence forces (and their dependants).

17 In addition, the 2006-07 MPHS excluded the following:

- people living in private dwellings in very remote parts of Australia
- people living in non-private dwellings such as hotels, university residences, students at boarding schools, patients in hospitals, residents of homes (e.g. retirement homes, homes for persons with disabilities), and inmates of prisons.

18 The 2006-07 MPHS was conducted in both urban and rural areas in all states and territories, but excluded people living in very remote parts of Australia. The exclusion of these people is expected to have only a minor impact on any aggregate estimates that are produced for individual states and territories, except in the Northern Territory where such people account for around 23% of the population.

COVERAGE

19 In the LFS, coverage rules are applied which aim to ensure that each person is associated with only one dwelling and hence has only one chance of selection in the survey. See **Labour Force, Australia** (cat. no. 6202.0) for more details.

SAMPLE SIZE

20 The initial sample for the 2006-07 MPHS consisted of approximately 19,800 private dwelling households. Of the 17,040 private dwelling households that remained in the survey after sample loss (for example, households selected in the survey which had no residents in scope for the LFS, vacant or derelict dwellings and dwellings under construction), approximately 14,190 or 83.3% fully responded to the MPHS.

WEIGHTING, BENCHMARKING AND ESTIMATION

21 Weighting is the process of adjusting results from a sample survey to infer results for the total in scope population. To do this, a 'weight' is allocated to each sample unit, which, for the MPHS can be either a person or a household. The weight is a value which indicates how many population units are represented by the sample unit. The first step in calculating weights for each unit is to assign an initial weight, which is the inverse of the probability of being selected in the survey. The initial weights are then calibrated to align with independent estimates of the population of interest, referred to as 'benchmarks'. Weights are calibrated against population benchmarks to ensure that the survey estimates conform to the independently estimated distribution of the population rather than the distribution within the sample itself.

Benchmarking

22 The estimation process for these surveys ensures that estimates of persons calibrate exactly to independently produced population totals at broad levels. The known population totals, commonly referred to as 'benchmarks', are produced according to the scope of the survey.

23 The survey was benchmarked to the estimated civilian population aged 25 to 64 years living in private dwellings in each state and territory, excluding persons out of scope (see Explanatory Notes 16 to 18). The process of weighting ensures that the survey estimates conform to person benchmarks by state, part of state, age and sex, and to household benchmarks by state, part of state and household composition. These benchmarks are produced from estimates of the resident population derived independently of the survey.

Estimation

24 Survey estimates of counts of persons or households are obtained by summing the weights of persons or households with the characteristic of interest.

IMPUTATION FOR NON RESPONSE

25 Approximately 36% of occupation and industry data for employed persons aged 25 to 64 years have been imputed from information collected in a previous month of the Labour Force Survey, because some persons were not asked their occupation and industry in some months of the survey. The following criteria were applied before imputation occurred:

- full-time or part-time status of employment was the same,
- status in employment (employee, employer, own account worker, contributing family worker) was the same, and
- hours usually worked in all jobs was different by no more than 10 hours.

26 Certain data items such as estimates of income had significant non-response for 2006-07 MPHS. The ABS has not applied any imputation methodology for estimation of values for non-responses, other than that outlined above.

INCOME LESS THAN ZERO

27 Some households reported negative income in the survey. This is possible if they incur losses in their unincorporated businesses or have negative returns from their investments. Studies of income and expenditure from the 1998-99 Household Expenditure Survey (HES) have shown that such households in the bottom income decile and with negative gross incomes tend to have expenditure levels that are comparable to those of households with higher income levels (and slightly above the average expenditures recorded for the fifth decile), indicating that these households have access to economic resources, such as wealth, or that the instance of low or negative income is temporary, perhaps reflecting business or investment start-up.

EQUIVALISED GROSS HOUSEHOLD INCOME QUINTILES

28 Quintiles are groupings of 20% of the total population when ranked in ascending order according to equivalised gross household income. The population used for this purpose includes all people living in private dwellings, including children and other persons under the age of 15 years. As the scope of this publication is restricted to only those persons aged 25 to 64 years, the distribution of this smaller population across the quintiles is not necessarily the same as it is for persons of all ages, i.e. the percentage of persons aged 25 to 64 years in each of these quintiles may be larger or smaller than 20%.

29 Equivalence scales are used to adjust the actual incomes of households in a way that enables the analysis of the relative wellbeing of people living in households of different size and composition. For example, it would be expected that a household comprising two people would normally need more income than a lone person household if all the people in the two households are to enjoy the same material standards of living. Adopting a per capita analysis would address one aspect of household size difference, but would address neither compositional

difference (i.e. the number of adults compared with the number of children) nor the economies derived from living together.

30 When household income is adjusted according to an equivalence scale, the equivalised income can be viewed as an indicator of the economic resources available to a standardised household. For a lone person household, it is equal to income received. For a household comprising more than one person, equivalised income is an indicator of the household income that would be required by a lone person household in order to enjoy the same level of economic wellbeing as the household in question.

31 The equivalence scale used in this publication was developed for the Organisation for Economic Co-operation and Development and is referred to as the "modified OECD" equivalence scale. It is widely accepted among Australian analysts of income distribution.

32 The scale allocates 1.0 point for the first adult (aged 15 years or older) in a household; 0.5 for each additional adult; and 0.3 for each child. Equivalised household income is derived by dividing total household income by the sum of the equivalence points allocated to household members. For example, if a household received combined gross income of \$2,100 per week and comprised two adults and two children (combined household equivalence points of 2.1), the equivalised gross household income would be calculated as \$1,000 per week.

33 For more information on the use of equivalence scales, see **Household Income and Income Distribution, Australia, 2005-06** (cat. no. 6523.0).

RELIABILITY OF ESTIMATES

34 The estimates provided in this publication are subject to sampling and non-sampling error.

Sampling error

35 Sampling error is the difference between the published estimates, derived from a sample of persons, and the value that would have been produced if all persons in scope of the survey had been included. For more information refer to the Technical Note.

Non-sampling error

36 Non-sampling error may occur in any collection, whether it is based on a sample or a full count such as a census. Sources of non-sample error include non-response, errors in reporting by respondents or recording of answers by interviewers, and errors in coding and processing data. Every effort is made to reduce the non-sampling error to a minimum by careful design of questionnaires, intensive training and supervision of interviewers and effective processing procedures.

CLASSIFICATIONS

Occupation

37 Occupation data are classified according to the **ANZSCO - Australian and New Zealand Standard Classification of Occupations, First Edition, 2006** (cat. no. 1220.0).

Industry

38 Industry data are classified according to the **Australian and New Zealand Standard Industrial Classification (ANZSIC), 2006** (cat. no. 1292.0).

Country of Birth

39 Country of birth data are classified according to the **Standard Australian Classification of Countries (SACC), 1998** (cat. no. 1269.0).

Education

40 Level of Education and Field of Education are classified according to the **Australian Standard Classification of Education (ASCED), 2001** (cat. no. 1272.0). The ASCED is a national standard classification which can be applied to all sectors of the Australian education system including schools, vocational education and training and higher education. ASCED replaces a number of classifications previously used in administrative and statistical systems, including the **ABS Classification of Qualifications (ABSCQ), 1993** (cat. no. 1262.0). The ASCED comprises two classifications: Level of Education and Field of Education.

41 Level of Education is defined as a function of the quality and quantity of learning involved in an educational activity. There are nine broad levels, 15 narrow levels and 64 detailed levels. For definitions of these levels see the **Australian Standard Classification of Education (ASCED), 2001** (cat. no. 1272.0).

42 The relationship between categories in the Level of Education classification should be essentially ordinal. In other words, educational activities at Broad Level 1 - Postgraduate Degree should be at a higher level than those at Broad Level 2 - Graduate Diploma and Graduate Certificate, and so on. However, when this is applied to educational provision in Australia, it is not always possible to assert that an ordinal relationship exists among the various levels of education.

43 Field of Education is defined as the subject matter of an educational activity. Fields of education are related to each other through the similarity of subject matter, through the broad purpose for which the education is undertaken, and through the theoretical content which underpins the subject matter.

44 There are 12 broad fields, 71 narrow fields and 356 detailed fields. For definitions of these fields see the **Australian Standard Classification of Education (ASCED), 2001** (cat. no. 1272.0).

Level of highest educational attainment

45 Level of Highest Educational Attainment is derived from information on Highest Year of School Completed and Level of Highest Non-school Qualification. The derivation process determines which of the 'non-school' or 'school' attainments will be regarded as the highest. Usually the higher ranking attainment will be self-evident, but in some cases some Secondary Education is regarded, for the purposes of obtaining a single measure, as higher than some Certificate level attainments.

46 The following decision table is used to determine which of the responses to questions on Highest Year of School Completed (coded to ASCED Broad Level 6) and Level of Highest Non-school Qualification (coded to ASCED Broad Level 5) will be regarded as the highest. It is emphasised that this table was designed for the purpose of obtaining a single value for the output variable Level of Highest Educational Attainment and is not intended to convey any other ordinality.

| Decision Table: Level of Highest Educational Attainment | | | | | | | |
|---|--------------------------|------------------------------------|----------------------|-----------------------|----------------------------------|-------------------------|-------------------------|
| ASCED LEVEL OF EDUCATION CODES | Certificate n.f.d. (500) | Certificate III or IV n.f.d. (510) | Certificate IV (511) | Certificate III (514) | Certificate I or II n.f.d. (520) | Certificate II (521) | Certificate I (524) |
| Secondary Education n.f.d. (600) | Certificate n.f.d. | Certificate III or IV n.f.d. | Certificate IV | Certificate III | Certificate I or II n.f.d. | Certificate II | Certificate I |
| Senior Secondary Education n.f.d. (610) | Senior Secondary n.f.d. | Certificate III or IV n.f.d. | Certificate IV | Certificate III | Senior Secondary n.f.d. | Senior Secondary n.f.d. | Senior Secondary n.f.d. |
| Year 12 (611) | Year 12 | Certificate III or IV n.f.d. | Certificate IV | Certificate III | Year 12 | Year 12 | Year 12 |
| Year 11 (613) | Year 11 | Certificate III or IV n.f.d. | Certificate IV | Certificate III | Year 11 | Year 11 | Year 11 |
| Junior Secondary Education n.f.d. (620) | Certificate n.f.d. | Certificate III or IV n.f.d. | Certificate IV | Certificate III | Certificate I or II n.f.d. | Certificate II | Certificate I |
| Year 10 (621) | Year 10 | Certificate III or IV n.f.d. | Certificate IV | Certificate III | Year 10 | Certificate II | Year 10 |
| Year 9 (622) | Certificate n.f.d. | Certificate III or IV n.f.d. | Certificate IV | Certificate III | Certificate I or II n.f.d. | Certificate II | Certificate I |
| Year 8 (623) | Certificate n.f.d. | Certificate III or IV n.f.d. | Certificate IV | Certificate III | Certificate I or II n.f.d. | Certificate II | Certificate I |
| Year 7 (624) | Certificate n.f.d. | Certificate III or IV n.f.d. | Certificate IV | Certificate III | Certificate I or II n.f.d. | Certificate II | Certificate I |

47 The decision table is used to rank the information provided in a survey about the qualifications and attainments of a single individual. It does not represent any basis for comparison between differing qualifications. For example, a person whose Highest Year of School Completed was Year 12, and whose Level of Highest Non-school Qualification was a Certificate III, would have those responses crosschecked on the decision table and as a result their Level of Highest Educational Attainment would be output as Certificate III. However, if the same person answered 'Certificate' to the highest non-school qualification question, without offering any further detail, it would be crosschecked against Year 12 on the decision table as 'Certificate not further defined'. The output would then be 'Year 12'. The decision table, therefore, does not necessarily imply that one qualification is 'higher' than the other.

CONFIDENTIALISED UNIT RECORD FILE

48 Confidentialised Unit Record Files (CURF) release confidentialised microdata from surveys, thereby facilitating interrogation and analysis of data. For all MPHS topics covered in the 2006-07 survey, an expanded CURF will be available in 2008. For more information on expanded CURFs refer to the ABS information paper [Multi-Purpose Household Survey, Expanded Confidentialised Unit Record File, Technical Manual, 2005-06](#) (cat. no. 4100.0).

DATA COMPARISON

49 Since the MPHS is conducted as a supplement to the LFS, data items collected in the LFS are also available. However, there are some important differences between the two surveys. The MPHS sample is a small subset of the LFS sample collated over 12 months and the MPHS had a response rate of 83% which is lower than the average LFS response rate of around 96% during the same period. Due to these differences between the MPHS and LFS samples, the MPHS data are weighted as a separate process to the weighting of LFS data (see Paragraph 20 of these Explanatory Notes for further information on weighting). Differences may therefore be found in the estimates collected in the LFS and published as part of the MPHS, when compared with estimates published in [Labour Force, Australia](#) (cat. no. 6202.0).

50 As well as collecting information about Adult Learning and the other topics mentioned in Paragraph 2 of these Explanatory Notes, the MPHS collected other socio-demographic information that has been included in this publication, such as level of highest non-school qualification, highest year of school completed, occupation of current job and industry of current job. Standard ABS questions have been used to collect these data items to ensure comparability with other ABS collections. However, estimates resulting from the MPHS may differ from the estimates produced from other ABS collections, for several reasons. The MPHS is a sample survey and its results are subject to sampling error, as are the results from other sample surveys. Users should take account of the RSEs on MPHS estimates and those of other survey estimates where comparisons are made.

51 Differences may also exist in the scope and/or coverage of the MPHS compared to other surveys. Furthermore, the MPHS was collected over the period July 2006 to June 2007. Differences in MPHS data, when compared to the estimates of other surveys, may result from different reference periods reflecting seasonal variations, non-seasonal events that may have impacted on one period but not another, or because of underlying trends in the phenomena being measured.

52 Finally, differences can occur as a result of using different collection methodologies. This is often evident in comparisons of similar data items reported from different ABS collections where, after taking account of definition and scope differences and sampling error, residual differences remain. These differences are often the result of the mode of the collections, such as whether data is collected by an interviewer or self-enumerated by the respondent, whether the data is collected from the person themselves or from a proxy respondent, and the level of experience of the interviewers. Differences may also result from the context in which questions are asked, i.e. where in the interview the questions are asked and the nature of preceding questions. The impacts on data of different collection methodologies are difficult to quantify. As a result, every effort is made to minimise such differences.

53 Appendix 2 contains a table, Comparison of Data from the 2006-07 MPHS and Other ABS Sources, which presents comparisons between a number of key MPHS data items and similar data items from other ABS sources. The comparison shows that, the 2006-07 MPHS data is broadly consistent with other ABS sources.

COMPARISON WITH OTHER COUNTRIES

54 The international data presented in Table 4 is from a Life Long Learning survey that was conducted as an ad-hoc module to the European Union Labour Force Survey in selected European countries in 2003. While survey methodology varied from country to country, the aim of the survey was the same in each country; to measure the participation and volume of lifelong learning in persons aged 25 to 64. Detailed information on the survey methodology is available at the following website: http://circa.europa.eu/Public/irc/dsis/edtcsl/library?l=/public/education_labour/lfs_2003_ahm_III. For RSEs of estimates provided in Table 4 and response rates, please contact the representative for the relevant country as listed on the United Nations Statistics Division website at http://unstats.un.org/unsd/methods/inter-natlinks/sd_natstat.asp.

FUTURE SURVEYS

55 The ABS will conduct the MPHS again during the 2007-08 financial year. The topics included in the 2007-08 MPHS are:

- Household Use of Information Technology
- Attitudes Towards the Environment
- Personal Fraud

ACKNOWLEDGEMENT

56 ABS publications draw extensively on information provided freely by individuals, businesses, governments and other organisations. Their continued cooperation is very much appreciated. Without it, the wide range of statistics published by the ABS would not be available. Information received by the ABS is treated in strict confidence as required by the **Census and Statistics Act 1905**.

RELATED PUBLICATIONS

57 Other ABS publications which may be of interest include:

- **A Directory of Education and Training Statistics (cat. no. 1136.0)**
- **Aspects of Literacy: Assessed Skill Levels, Australia (cat. no. 4228.0)**
- **Aspects of Literacy: Profiles and Perceptions, Australia (cat. no. 4226.0)**
- **Education and Training Experience, Australia (cat. no. 6278.0)**
- **Education and Training Indicators, Australia (cat. no. 4230.0)**
- **Education and Work, Australia (formerly Transition from Education to Work, Australia) (cat. no. 6227.0)**
- **Employer Training Expenditure and Practices, Australia (cat. no. 6362.0)**
- **General Social Survey: Summary Results, Australia (cat. no. 4159.0)**
- **Information Paper: Measuring Learning in Australia - A Framework for Education and Training**

Statistics (cat. no. 4213.0)

- **Information Paper: Measuring Learning in Australia - Dictionary of Standards for Education and Training Statistics (cat. no. 4232.0.55.001)**
- **Information Paper: Measuring Learning in Australia - Plan to improve the Quality, Coverage and Use of Education and Training Statistics (cat. no. 4231.0)**
- **Labour Force, Australia (cat. no. 6202.0)**
- **Schools, Australia (cat. no. 4221.0)**
- **Adult Literacy and Life Skills Survey, Summary Results, Australia, 2006 (cat. no. 4228.0)**

58 Current publications and other products are available from the ABS website <<https://www.abs.gov.au>>. The ABS issues a daily release advice on the website which details products to be released in the week ahead.

Glossary

GLOSSARY

Arts, craft or recreational course

This includes:

- Courses run through an Adult and Community Education Centre.
- Hobby courses.
- Recreational courses run by or at a TAFE.
- YWCA/YMCA courses.

Australian Standard Classification of Education (ASCED)

The ASCED is a national standard classification which includes all sectors of the Australian education system: that is, schools, vocational education and training, and higher education. From 2001, ASCED replaced a number of classifications used in administrative and statistical systems, including the Australian Bureau of Statistics Classification of Qualifications (ABSCQ). The ASCED comprises two classifications: Level of Education and Field of Education. See **Australian Standard Classification of Education (ASCED), 2001 (cat. no. 1272.0)**.

Bridging course

Bridging and 'enabling' courses provide specific background to allow further study for students who do not have the prerequisite subject matter knowledge or who have not studied for some time.

Certificate not further defined

Survey responses are coded to Certificate not further defined (n.f.d.) when there is not enough information to code them to Certificate I, II, III or IV in the **Australian Standard Classification of Education (ASCED), 2001 (cat. no. 1272.0)**, Level of Education classification.

Country of birth

Country of birth has been classified according to the **Standard Australian Classification of Countries (SACC), 1998 (cat. no. 1269.0)**.

Educational institution

Any institution whose primary role is education. Included are schools, higher education establishments, colleges of technical and further education, public and private colleges, etc. Excluded are institutions whose primary role is not education, for example, hospitals.

Employed

Persons who during the reference week:

- worked for one hour or more for pay, profit, commission or payment in kind in a job or business, or on a farm (comprising employees, employers and own account workers); or
- worked for one hour or more without pay in a family business or on a farm (i.e. contributing family workers); or
- were employees who had a job but were not at work and were:
 - away from work for less than four weeks up to the end of the reference week; or away from work for more than four weeks up to the end of the reference week and received pay for some or all of the four week period to the end of the reference week; or
 - away from work as a standard work or shift arrangement; or
 - on a strike or locked out; or
 - on workers' compensation and expected to return to their job; or
 - were employers or own account worker who had a job, business or farm, but were not at work.

Employed full-time

Employed persons who usually worked 35 hours or more a week (in all jobs) and those who, although usually working less than 35 hours a week, worked 35 hours or more during the reference week.

Employed part-time

Employed persons who usually worked less than 35 hours a week (in all jobs) and either did so during the reference week, or were not at work in the reference week.

Equivalent household income

Equivalising adjusts actual income to take account of the different needs of households of different size and composition. There are economic advantages associated with living with others, because household resources, especially housing, can be shared. The equivalence scale used to obtain equivalised incomes is that used in studies by the Organisation for Economic Co-operation and Development (OECD) and is referred to as the 'modified OECD scale'. The scale gives a weight of 1.0 to the first adult in the household, a weight of 0.5 for each additional adult (persons aged 15 years and over), and a weight of 0.3 for each child. For each household, the weights for household members are added together to form the household weight. Total household income is then divided by the household weight to give an income that a lone person household would need for a similar standard of living. Equivalised weekly household income can be viewed as an indicator of the economic resources available to each member of the household.

Field of education

Field of Education is defined as the subject matter of an educational activity. It is categorised according to the **Australian Standard Classification of Education (ASCED), 2001 (cat. no. 1272.0)** Field of Education classification. The ASCED comprises two classifications: Level of Education and Field of Education. See **Australian Standard Classification of Education (ASCED), 2001 (cat. no. 1272.0)**.

Formal learning

Refers to learning which is structured, taught learning in institutions and organisations and leads to a recognised qualification issued by a relevant body, in recognition that a person has achieved learning outcomes or competencies relevant to identified individual, professional, industry or community needs. A learning activity is formal if it leads to a learning achievement that is possible to position within the Australian Qualifications Framework (AQF) and includes workplace training if such training results in a qualification.

Industry

From 2006, Industry has been classified according to the **Australian and New Zealand Standard Industrial Classification (ANZSIC), 2006 (cat. no. 1292.0)**.

Job-related reason

Formal or non-formal learning was classified as being for a 'job-related reason' if the main purpose for participating in the learning was one of the following:

- to get a job
- to get a better job or promotion
- it was a requirement for job
- wanted extra skills for job
- to start own business
- to develop existing business
- to try for a different career

Informal learning

Refers to unstructured, non-institutionalised learning activities that are related to work, family, community or leisure. Activities may occur on a self-directed basis, but are excluded from scope if there is no specific intention to learn.

Learning opportunities

Are ways an individual can improve their knowledge, skills or competence.

Level of education

Level of education is a function of the quality and quantity of learning involved in an educational activity. It is categorised according to the **Australian Standard Classification of Education (ASCED), 2001 (cat. no. 1272.0)**, Level of Education classification.

Level of highest non-school qualification

Level of highest non-school qualification identifies the highest achievement a person has attained in any area of study, outside of their school achievements. See also level of highest educational attainment.

Level of highest educational attainment

Level of highest educational attainment identifies the highest achievement a person has attained in any area of study. It is not a measurement of the relative importance of different fields of study but a ranking of qualifications and other educational attainments regardless of the particular area of study or the type of institution in which the study was undertaken. See paragraphs 45-47 of the Explanatory Notes for how highest level is derived.

Level not determined

Level not determined includes inadequately described responses and cases where no response was given.

Non-formal learning

Non-formal learning refers to structured, taught learning, but differs from formal learning in that it does not lead to a qualification within the AQF. It includes non-accredited workplace training, that is, training that does not lead to a recognised qualification.

Non-school qualification

Non-school qualifications are awarded for educational attainments other than those of pre-primary, primary or secondary education. They include qualifications at the Postgraduate Degree level, Master Degree level, Graduate Diploma and Graduate Certificate level, Bachelor Degree level, Advanced Diploma and Diploma level, and Certificates I, II, III and IV levels. Non-school qualifications may be attained concurrently with school qualifications.

Not in the labour force

Persons who are not in the categories 'employed' or 'unemployed' as defined.

Occupation

Classified according to the ANZSCO - **Australian New Zealand Standard Classification of Occupations, First Edition 2006 (cat. no. 1220.0)**.

Participation

Participation relates to formal, non-formal or informal learning undertaken in the last 12 months.

Private lessons

Private lessons are a planned series of learning experiences given by experts or people acting as experts. The role of the teacher/tutor is to increase the knowledge or skills of the participant. The lessons are usually undertaken by one or very few learners at any one time.

TAFE

A Technical and Further Education institution. In Victoria this may also be interpreted as Training and Further Education.

Unemployed

Persons aged 15 years and over who were not employed during the reference week, and:

- had actively looked for full-time or part-time work at any time in the four weeks up to the end of the reference week and were available for work in the reference week; or
- were waiting to start a new job within four weeks from the end of the reference week and could have started in the reference week if the job had been available then.

Work-related course

Learning activities which are primarily undertaken to obtain, maintain or improve employment-related skills or competencies, improve job/career opportunities and generally to improve opportunities for advancement and promotion.

Abbreviations

ABBREVIATIONS

The following symbols and abbreviations are used in this publication:

| | |
|--------|---|
| ABS | Australian Bureau of Statistics |
| ABSCQ | Australian Bureau of Statistics Classification of Qualifications |
| ANZSCO | Australian and New Zealand Standard Classification of Occupations |

| | |
|--------|---|
| ANZSIC | Australian and New Zealand Standard Industrial Classification |
| AQF | Australian Qualifications Framework |
| ASCED | Australian Standard Classification of Education |
| CAI | computer assisted interviewing |
| CURF | confidentialised unit record file |
| LFS | Labour Force Survey |
| MPHS | Multi-Purpose Household Survey |
| n.f.d. | not further defined |
| RSE | relative standard error |
| SACC | Standard Australian Classification of Countries |
| SE | standard error |

Populations and Data Items List (Appendix)

APPENDIX 1 POPULATIONS AND DATA ITEMS LIST

DATA AVAILABLE ON REQUEST

The ABS has a range of data available on request from the Adult Learning topic collected in the Multi-Purpose Household Survey (MPHS). More detailed breakdowns of some data items may also be available on request.

The population(s) refer to the persons in the survey to whom the data item relates.

For information about ABS data available on request, contact the National Information and Referral Service on 1300 135 070.

POPULATIONS

Population 1 All persons aged 25 to 64 years

Population 2 Persons aged 25 to 64 years who participated in formal learning in last 12 months

Population 3 Persons aged 25 to 64 years who participated in non-formal learning in last 12 months

Population 4 Persons aged 25 to 64 years who participated in formal or non-formal learning in last 12 months

Population 5 Persons aged 25 to 64 years who participated in informal learning in last 12 months

Population 6 Persons aged 25 to 64 years whose most recent formal learning was for a job-related reason

Population 7 Persons aged 25 to 64 years whose most recent non-formal learning was for a job-related reason

Population 8 Persons aged 25 to 64 years who did not participate in formal or non-formal learning in last 12 months but wanted to

Population 9 Employed persons aged 25 to 64 years

Population 10 Persons aged 25 to 64 years who did not participate in learning in last 12 months

DATA ITEMS

CHARACTERISTICS

Sex

Age (in single years)

Country of birth and year of arrival

State or territory of usual residence

Area of usual residence

Region of usual residence

Indigenous identifier

Marital status

Relationship in household

LABOUR FORCE

Full-time/Part-time employment

Labour force status

Multiple job holder

Hours usually worked

Occupation

Industry

EDUCATIONAL ATTAINMENT

Level of highest educational attainment

Field of highest educational attainment

Level of highest non-school qualification

Field of highest non-school qualification

Highest year of school completed

INCOME

Total gross weekly household income - all sources

Total gross weekly household income - all sources - quintiles

Equivalised weekly household income - quintiles

Partners weekly income - all sources

Partners sources of income

Partners main source of income

Partners types of government pensions/allowances received

Weekly personal income - all sources

Weekly personal income - all sources - quintiles

All sources of personal income

Main source of personal income

Personal types of government pensions/allowances received

ADULT LEARNING

Whether participated in formal learning

Number of formal courses participated in previous 12 months

Level of most recent formal course

Field of most recent formal course

Institution or organisation at which participated in most recent formal course

Main reason for participating in most recent formal course

Whether currently studying for most recent formal course

Whether participated in non-formal learning

Number of non-formal courses participated in previous 12 months

Type of most recent non-formal course

Main field of most recent non-formal course

Institution or organisation at which participated in most recent non-formal course

Whether most recent non-formal course participated in as distance or correspondence

Whether currently studying for most recent non-formal course

Whether participated in most recent non-formal course for a job-related reason

Main reason for participating in most recent non-formal course

Whether participated in informal learning

Type of informal learning participated in

Whether wanted to participate in formal or non-formal learning

All reasons for not participating in formal or non-formal learning

Main reason for not participating in formal or non-formal learning

Whether wanted to participate in more formal or non-formal learning

All reasons for not participating in more formal or non-formal learning

Main reason for not participating in more formal or non-formal learning

All reasons for not wanting to participate in formal or non-formal learning

Main reason for not wanting to participate in formal or non-formal learning

Difficulties undertaking formal or non-formal learning

Whether looked for learning opportunities

All sources of learning opportunities found

HOUSEHOLD USE OF INFORMATION TECHNOLOGY

Whether has access to computer at home

Whether has access to Internet at home

Whether used Internet in last 12 months

Main purpose of Internet access

Whether accessed Internet at home

Whether accessed Internet at work

Whether accessed Internet at any other place

Data Comparison (Appendix)

APPENDIX 2 DATA COMPARISON

COMPARISON OF DATA FROM MPHS 2006-07 AND OTHER ABS SOURCES

| | Other ABS source of comparison % | MPHS 2006-07 % |
|---|--|-------------------|
| LABOUR FORCE SURVEY - MARCH 2007 | | |
| Labour force status | | |
| Employed full-time | 56.7 | 57.4 |
| Employed part-time | 18.3 | 18.9 |
| Unemployed | 2.7 | 2.6 |
| Not in the labour force | 22.3 | 21.1 |
| Country of birth | | |
| Australia | 69.6 | 70.6 |
| Overseas | 30.4 | 29.4 |
| ADULT LITERACY AND LIFE SKILLS SURVEY - JULY 2006, SEPTEMBER 2006 - JANUARY 2007 | | |
| Level of highest non-school qualification | | |
| Postgraduate degree, Graduate diploma or Graduate certificate | 7.6 | 6.8 |
| Bachelor degree | 16.5 | 16.8 |
| Advanced diploma or diploma | 10.2 | 9.5 |
| Certificate III or IV | 17.6 | 17.9 |
| Certificate I or II | 7.7 | 6.3 |
| Certificate n.f.d. | 1.3 | 1.3 |
| No non-school qualification | 37.4 | 40.2 |
| Highest year of school completed | | |
| Year 12 or equivalent | 49.3 | 49.3 |
| Year 11 or equivalent | 11.1 | 11.8 |
| Year 10 or equivalent | 25.3 | 26.8 |
| Year 9 or equivalent | 7.5 | 6.7 |
| Year 8 or below | 6.7 | 5.2 |
| SURVEY OF EDUCATION AND WORK - MAY 2007 | | |
| Level of highest non-school qualification | | |
| Postgraduate degree, Graduate diploma or Graduate certificate | 7.2 | 6.8 |
| Bachelor degree | 16.8 | 16.8 |
| Advanced diploma or diploma | 9.6 | 9.5 |
| Certificate III or IV | 17.8 | 17.9 |
| Certificate I or II | 5.7 | 6.3 |
| Certificate n.f.d. | 1.4 | 1.3 |
| No non-school qualification | 41.4 | 40.2 |
| Highest year of school completed | | |
| Year 12 or equivalent | 51.8 | 49.3 |
| Year 11 or equivalent | 10.4 | 11.8 |
| Year 10 or equivalent | 26.7 | 26.8 |
| Year 9 or equivalent | 6.2 | 6.7 |
| Year 8 or below | 4.7 | 5.2 |
| Occupation | | |
| Managers | 14.2 | 13.9 |
| Professional | 22.9 | 21.0 |
| Technicians and Trades Workers | 14.7 | 13.0 |
| Community and Personal Service Workers | 8.2 | 7.2 |
| Clerical and Administrative Workers | 16.6 | 15.2 |
| Sales Workers | 6.5 | 6.4 |
| Machinery Operators and Drivers | 7.2 | 6.3 |
| Labourers | 9.7 | 9.3 |
| Not stated | - | 7.7 |
| Industry | | |
| Agriculture, forestry and fishing | 3.0 | 2.8 |
| Mining | 1.4 | 0.9 |
| Manufacturing | 10.5 | 8.6 |
| Electricity, gas, water and waste service | 1.1 | 1.1 |
| Construction | 8.8 | 8.0 |
| Wholesale trade | 4.3 | 3.8 |
| retail trade | 8.9 | 8.9 |
| Accommodation and food service | 4.5 | 3.9 |
| Transport, postal and warehousing | 5.8 | 5.1 |
| Information media and telecommunications | 2.5 | 2.0 |

| | | |
|---|------|------|
| Financial and insurance services | 4.2 | 4.0 |
| Rental, hiring and real estate services | 1.9 | 1.7 |
| Professional, scientific and technical services | 7.4 | 7.0 |
| Administrative and support services | 3.6 | 3.7 |
| Public administration and safety | 6.8 | 6.5 |
| Education and training | 8.4 | 7.6 |
| Health care and social assistance | 11.4 | 11.1 |
| Arts and recreation services | 1.6 | 1.5 |
| Other services | 4.1 | 4.2 |
| Not stated | - | 7.7 |

- nil or rounded to zero (including null cells)

Data Quality (Technical Note)

TECHNICAL NOTE DATA QUALITY

RELIABILITY OF THE ESTIMATES

1 Since the estimates in this publication are based on information obtained from occupants of a sample of dwellings, they are subject to sampling variability. That is, they may differ from those estimates that would have been produced if all occupants of all dwellings had been included in the survey. One measure of the likely difference is given by the standard error (SE), which indicates the extent to which an estimate might have varied by chance because only a sample of dwellings (or occupants) was included. There are about two chances in three (67%) that a sample estimate will differ by less than one SE from the number that would have been obtained if all dwellings had been included, and about 19 chances in 20 (95%) that the difference will be less than two SEs.

2 Another measure of the likely difference is the relative standard error (RSE), which is obtained by expressing the SE as a percentage of the estimate:

$$RSE\% = \left(\frac{SE}{estimate} \right) \times 100$$

3 RSEs for estimates from 2006-07 MPHS are published for the first time in 'direct' form. Previously a statistical model was produced that relates the size of estimates to their corresponding RSEs, and this information was displayed via an 'SE table'. From this point onwards, RSEs for MPHS estimates have now been calculated for each separate estimate and published individually. The Jackknife method of variance estimation is used for this process, which involves the calculation of 30 'replicate' estimates based on 30 different subsamples of the original sample. The variability of estimates obtained from these subsamples is used to estimate the sample variability surrounding the main estimate.

4 Limited publication space does not allow for the separate indication of the SEs and/or RSEs of all the estimates in this publication, only those for Table 1 have been included at the end of these Technical Notes. However, RSEs for all these estimates are available free-of-charge on the ABS web site <www.abs.gov.au>, released in spreadsheet format as an attachment to this publication, Adult Learning, Australia, 2006-07 (cat. no. 4229.0).

5 In the tables in this publication, only estimates (numbers, percentages, means and medians) with RSEs less than 25% are considered sufficiently reliable for most purposes. However, estimates with larger RSEs have been included and are preceded by an asterisk (e.g. *3.4) to indicate they are subject to high SEs and should be used with caution. Estimates with RSEs greater than 50% are preceded by a double asterisk (e.g. **2.1) to indicate that they are considered too unreliable for general use.

CALCULATION OF STANDARD ERROR

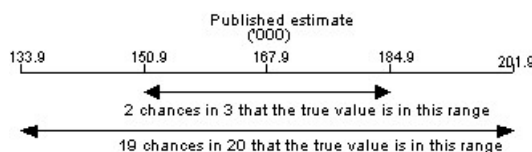
6 SEs can be calculated using the estimates (counts or means) and the corresponding RSEs. For example Table 1 shows that the estimated number of persons aged 45-49 years who had participated in formal learning in the last 12 months is 167,900. In the corresponding RSE table (on page 45), the RSE for this estimate is shown to be 10.1%. The SE is:

$$SE \text{ of estimate} = \left(\frac{RSE}{100} \right) \times estimate$$

$$= 0.101 * 167,900$$

$$= 17,000 \text{ (rounded to nearest 1,000)}$$

7 Therefore there are about two chances in three that the value that would have been produced if all dwellings had been included in the survey will fall within the range 150,900 to 184,900 and about 19 chances in 20 that the value will fall within the range 133,900 to 201,900. This example is illustrated overleaf.



PROPORTIONS AND PERCENTAGES

8 Proportions and percentages formed from the ratio of two estimates are also subject to sampling errors. The size of the error depends on the accuracy of both the numerator and the denominator. A formula to approximate the RSE of a proportion is given below. This formula is only valid when x is a subset of y.

$$RSE\left(\frac{x}{y}\right) = \sqrt{[RSE(x)]^2 + [RSE(y)]^2}$$

9 For example in Table 1 the estimate for the total number of persons aged 25 to 64 years employed full-time is 6,266,500. The estimated number of persons aged 25 to 64 years employed full-time that participated in formal or non-formal learning in the previous 12 months is 2,853,600, so the proportion of persons employed full-time who participated in formal or non-formal learning is 2,853,600/6,266,500 or 45.5%.

10 From the RSE table on page 45 the RSE of the total number of persons aged 25 to 64 years employed full-time is 0.9% and the RSE of the total number of persons aged 25 to 64 years employed full-time that participated in formal or non-formal learning in the previous 12 months is 2.0%.

11 Applying the above formula, the RSE of the proportion is:

$$RSE = \sqrt{(2.0)^2 + (0.9)^2} = 1.8\%$$

12 This then gives an SE of the percentage (45.5%) of $(1.8/100) \times 45.5 = 0.8$ percentage points.

13 Therefore there are about two chances in three that the proportion of persons aged 25 to 64 years employed full-time that participated in formal or non-formal learning is between 44.7% and 46.3% and 19 chances in 20 that the proportion is within the ranges 43.9% and 47.1%.

DIFFERENCES

14 Published estimates may also be used to calculate the difference between two survey estimates (of numbers or percentages). Such an estimate is subject to sampling error. The sampling error of the difference between two estimates depends on their SEs and the relationship (correlation) between them. An approximate SE of the difference between two estimates (x-y) may be calculated by the following formula:

$$SE(x-y) = \sqrt{[SE(x)]^2 + [SE(y)]^2}$$

15 While this formula will only be exact for differences between separate and uncorrelated characteristics or subpopulations, it is expected to provide a good approximation for all differences likely to be of interest in this publication.

SIGNIFICANCE TESTING

16 The statistical significance test for any of the comparisons between estimates was performed to determine whether it is likely that there is a difference between the corresponding population characteristics. The standard error of the difference between two corresponding estimates (x and y) can be calculated using the formula in paragraph 14. This standard error is then used to calculate the following test statistic:

$$\left(\frac{x-y}{SE(x-y)} \right)$$

17 If the value of this test statistic is greater than 1.96 then we may say there is good evidence of a real difference in the two populations with respect to that characteristic. Otherwise, it cannot be stated with confidence that there is a real difference between the populations.

18 The imprecision due to sampling variability, which is measured by the SE, should not be confused with inaccuracies that may occur because of imperfections in reporting by respondents and recording by interviewers, and errors made in coding and processing data. Inaccuracies of this kind are referred to as non-sampling error, and they occur in any enumeration, whether it be a full count or sample. Every effort is made to reduce non-sampling error to a minimum by careful design of questionnaires, intensive training and supervision of interviewers, and efficient operating procedures.

RELATIVE STANDARD ERROR

19 Relative Standard Errors for Table 1 are included overleaf. However, RSEs for all tables are available free-of-charge on the ABS website <www.abs.gov.au>, released in spreadsheet format as an attachment to this publication, Adult Learning, Australia 2006-07 (cat. no. 4229.0).

ALL PERSONS, Participation in learning by selected characteristics, RSEs

| | Participated in formal learning % | Participated in non-formal learning % | Total participated in formal or non-formal learning % | Participated in informal learning % | Did not participate in learning % | All persons aged 25 to 64 % |
|---|---|--|--|---|--|--------------------------------------|
| Sex | | | | | | |
| Males | 5.1 | 2.5 | 2.0 | 0.6 | 2.2 | 0.1 |
| Females | 2.8 | 2.4 | 1.9 | 1.2 | 3.9 | - |
| Age group (years) | | | | | | |
| 25-29 | 6.8 | 4.8 | 3.8 | 2.1 | 8.8 | 0.2 |
| 30-34 | 7.3 | 3.9 | 2.9 | 1.8 | 6.3 | - |
| 35-39 | 8.0 | 3.8 | 3.2 | 2.6 | 10.4 | - |
| 40-44 | 8.8 | 5.4 | 4.1 | 2.1 | 7.4 | - |
| 45-49 | 10.1 | 4.8 | 4.2 | 1.8 | 6.5 | - |
| 50-54 | 12.2 | 6.2 | 5.7 | 2.2 | 7.0 | - |
| 55-59 | 14.7 | 6.8 | 5.9 | 2.5 | 7.3 | 0.1 |
| 60-64 | 19.5 | 5.7 | 5.8 | 2.5 | 4.4 | 0.1 |
| Country of birth | | | | | | |
| Born in Australia | 4.0 | 2.0 | 1.7 | 1.2 | 3.9 | 0.7 |
| Born overseas | 7.5 | 3.3 | 2.8 | 2.3 | 4.7 | 1.7 |
| Area of usual residence | | | | | | |
| State capital cities | 3.6 | 2.1 | 1.7 | 0.9 | 2.7 | - |
| Rest of Australia | 5.1 | 2.7 | 2.2 | 1.4 | 4.5 | 0.1 |
| Labour force status | | | | | | |
| Employed full-time | 4.4 | 2.1 | 2.0 | 1.1 | 2.6 | 0.9 |
| Employed part-time | 7.8 | 5.0 | 3.8 | 2.9 | 6.3 | 2.7 |
| Unemployed | 17.1 | 16.4 | 13.3 | 8.4 | 15.3 | 7.0 |
| Not in the labour force | 8.9 | 8.0 | 6.6 | 3.2 | 5.2 | 2.5 |
| Level of highest non-school qualification | | | | | | |
| Postgraduate degree, Graduate diploma or Graduate certificate | 9.8 | 7.3 | 6.2 | 4.6 | 19.5 | 4.2 |
| Bachelor degree | 5.8 | 3.2 | 2.9 | 2.9 | 10.0 | 2.7 |
| Advanced diploma or diploma | 7.7 | 5.7 | 4.8 | 4.0 | 14.6 | 3.2 |
| Certificate III or IV | 7.2 | 5.3 | 4.1 | 2.9 | 6.7 | 2.4 |
| Certificate I or II | 17.0 | 8.8 | 7.2 | 5.7 | 10.4 | 5.3 |
| Certificate n.f.d. | 20.3 | 15.5 | 13.3 | 10.4 | 26.0 | 8.8 |

| | | | | | | |
|---|------------|------------|------------|------------|------------|----------|
| No non-school qualification | 7.0 | 5.5 | 4.0 | 1.7 | 2.5 | 1.2 |
| Highest year of school completed | | | | | | |
| Year 12 or equivalent | 3.7 | 2.2 | 1.9 | 1.5 | 4.1 | 1.3 |
| Year 11 or equivalent | 9.2 | 5.5 | 4.6 | 2.9 | 8.4 | 3.0 |
| Year 10 or equivalent | 6.3 | 4.2 | 3.8 | 2.8 | 4.1 | 2.3 |
| Year 9 or equivalent | 17.1 | 10.0 | 9.0 | 6.7 | 7.0 | 4.2 |
| Year 8 or below | 35.8 | 17.6 | 14.5 | 7.3 | 8.3 | 4.7 |
| Equivalised weekly household income - quintiles | | | | | | |
| Lowest quintile | 11.7 | 8.4 | 7.4 | 4.3 | 5.3 | 2.5 |
| Second quintile | 8.9 | 7.2 | 5.9 | 4.1 | 5.9 | 3.0 |
| Third quintile | 8.1 | 5.5 | 5.0 | 3.5 | 6.3 | 3.1 |
| Fourth quintile | 5.6 | 3.3 | 3.2 | 3.1 | 5.4 | 2.2 |
| Highest quintile | 6.4 | 3.7 | 3.5 | 2.5 | 8.6 | 2.6 |
| Not known or not stated | 11.5 | 5.2 | 5.5 | 3.6 | 6.4 | 3.2 |
| Total(a)(b) | 2.8 | 1.8 | 1.4 | 0.8 | 2.4 | - |

- nil or rounded to zero (including null cells)

(a) Includes persons whose country of birth could not be determined.

(b) Includes persons whose level of highest non-school qualification could not be determined and persons who have never attended school.

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